Amendments to the Claims

The current listing of the claims replaces all previous amendments and listing to the claims.

1. (Currently Amended) An objective lens drive apparatus for use configured to be

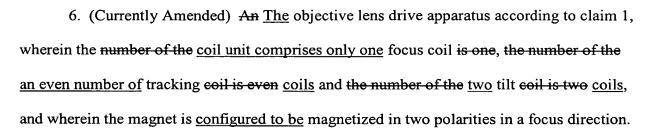
used in an optical pickup, comprising:

a magnetic circuit including comprising a magnet configured to be magnetized in two polarities; and

a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit.

- 2. (Currently Amended) An The objective lens drive apparatus according to claim 1, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets magnets.
- 3. (Currently Amended) An The objective lens drive apparatus according to claim 1, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil, the tracking coil and the tilt coil are separately mounted disposed on the printed circuit boards.
- 4. (Currently Amended) An The objective lens drive apparatus according to claim 1, wherein the coil unit includes comprises a plurality of first printed circuit boards and second printed boards, and the focus coil and the tracking coil are mounted disposed on the first printed circuit board and the tilt coil is mounted disposed on the second printed board.
- 5. (Currently Amended) An The objective lens drive apparatus according to claim 1, wherein the coil unit includes comprises a plurality of first printed circuit boards and second printed boards, and the focus coil and the tilt coil are mounted on the first printed circuit board and the tracking coil is mounted on the second printed board.





- 7. (Currently Amended) An The objective lens drive apparatus according to claim 1, wherein the coil unit comprises an even number of the focus coil is even coils, the number of the only one tracking coil is one and the number of the and two tilt coil is two coils, and wherein the magnet is configured to be magnetized in two polarities in a tracking direction.
- 8. (Currently Amended) An objective lens drive apparatus for use configured to be used in an optical pickup, comprising:

two magnetic circuits each including comprising a magnet configured to be magnetized in two polarities; and

a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of one of the magnetic circuits.

- 9. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap magnets.
- 10. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil, the tracking coil and the tilt coil are separately mounted disposed on the printed circuit boards.
- 11. (Currently Amended) An The objective lens drive apparatus according to claim8, wherein the coil unit includes comprises a plurality of first printed circuit boards and



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second printed boards, and the focus coil and the tracking coil are mounted disposed on the first printed eireuit board and the tilt coil is mounted disposed on the second printed board.

- 12. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the coil unit includes comprises a plurality of first printed circuit boards and second printed boards, and the focus coil and the tilt coil are mounted disposed on the first printed circuit board and the tracking coil is mounted on the second printed board.
- 13. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the coil unit is fixed to the two side surfaces of disposed on a lens holder extending in parallel with a tracking direction.
- 14. (Currently Amended) An The objective lens drive apparatus according to 8, wherein the number of the coil unit comprises only one focus coil is one, the number of the an even number of tracking coil is even coils and the number of the two tilt coil is two coils, and also wherein the magnet is configured to be magnetized in two polarities in a focus direction.
- 15. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the number of the coil unit comprises an even number of focus coil is even coils, the number of the only one tracking coil is one and the number of the and two tilt coil is two coils, and also wherein the magnet is configured to be magnetized in two polarities in the focus direction.
- 16. (Currently Amended) An The objective lens drive apparatus according to claim 8, wherein the focus coil is wound on the side surface of a lens holder, and the tracking coil and the tilt coil are respectively mounted disposed on the two side surfaces lens holder extending in parallel with the tracking direction



- 17. (Currently Amended) An The objective lens drive apparatus according to claim 16, wherein the numbers of the coil unit comprises two tracking coils and two tilt coils mounted on one the surface of disposed on the lens holder are respectively two.
- 18. (Currently Amended) An The objective lens drive apparatus according to claim 16, wherein the tracking coil and the tilt coil are both superimposed on the focus eoils coil.
- 19. (Currently Amended) An The objective lens drive apparatus according to claim 16, wherein the tracking coils and the tilt coils are both wound around coil winding frames provided on and projected from the side surfaces of the lens holder.
- 20. (Currently Amended) An The objective lens drive apparatus according to claim 16, wherein the tracking coils are wound around coil winding frames provided on and projected from the side surfaces of the lens holder and the tilt coils are superimposed on the focus eoils coil.
- 21. (Currently Amended) An The objective lens drive apparatus according to claim 16, wherein the tracking coils are superimposed on the focus eoils coil and the tilt coils are wound around coil winding frames provided on and projected from the side surfaces of the lens holder.
- 22. (Currently Amended) An objective lens drive apparatus <u>configured to be</u> used in an optical pickup <u>for detecting to detect</u> the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:
- a magnetic circuit including comprising a magnet configured to be magnetized in two polarities; and
- a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,



wherein a focus servo is <u>configured to be</u> executed by supplying currents respectively to a plurality of the focus coils due to the <u>a</u> sum of drive forces generated in the plurality of focus coils, <u>and</u>

wherein the <u>an</u> inclination adjustment of the objective lens is <u>configured to be</u> executed by generating <u>a</u> moment around the <u>a</u> center of gravity of a movable part due to the <u>a</u> difference between the drive forces.

- 23. (Currently Amended) An The objective lens drive apparatus according to claim 22, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets magnets.
- 24. (Currently Amended) An The objective lens drive apparatus according to claim 22, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted disposed on the printed circuit boards.
- 25. (Currently Amended) An The objective lens drive apparatus according to claim 22, wherein the coil unit includes a plurality of comprises a printed circuit board, and the focus coil and the tracking coil are mounted disposed on the printed circuit board.
- 26. (Currently Amended) An The objective lens drive apparatus according to 22, wherein the number of the coil unit comprises an even number of focus coil is even coils and the number of the only one tracking coil is one, and the magnet is configured to be magnetized in two polarities in a tracking direction.
- 27. (Currently Amended) An objective lens drive apparatus <u>configured to be</u> used in an optical pickup <u>for detecting to detect</u> the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

a magnetic circuit including comprising a magnet configured to be magnetized in two polarities; and



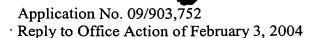
a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of the magnetic circuit,

wherein a tracking servo is configured to be executed by supplying currents respectively to a plurality of the tracking coils due to the a sum of drive forces generated in the plurality of focus coils, and

wherein the <u>an</u> inclination adjustment of the objective lens is <u>configured to be</u>
executed by generating <u>a</u> moment around the <u>a</u> center of gravity of a movable part due to the
<u>a</u> difference between the drive forces.

- 28. (Currently Amended) An The objective lens drive apparatus according to claim 27, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnet gaps magnets.
- 29. (Currently Amended) An The objective lens drive apparatus according to claim 27, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted disposed on the printed circuit boards.
- 30. (Currently Amended) An The objective lens drive apparatus according to claim 27, wherein the coil unit includes a plurality of comprises a printed circuit board, and the focus coil and the tracking coil are mounted on the printed circuit board.
- 31. (Currently Amended) An The objective lens drive apparatus according to claim 27, wherein the number of the coil unit comprises only one focus coil is one and the number of the an even number of tracking coil is even coils, and the magnet is configured to be magnetized in two polarities in a focus direction.
- 32. (Currently Amended) An objective lens drive apparatus <u>configured</u> used in an optical pickup <u>for detecting to detect</u> the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:





two magnetic circuits respectively including comprising a magnet configured to be magnetized in two polarities; and

a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of one of the magnetic eircuit circuits,

wherein a focus servo is <u>configured to be</u> executed by supplying currents respectively to a plurality of the focus coils due to the <u>a</u> sum of drive forces generated in the plurality of focus coils, <u>and</u>

wherein the <u>an</u> inclination adjustment of the objective lens is <u>configured to be</u>
executed by generating <u>a</u> moment around the <u>a</u> center of gravity of a movable part due to the
<u>a</u> difference between the drive forces.

- 33. (Currently Amended) An The objective lens drive apparatus according to claim 32, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnets magnets.
- 34. (Currently Amended) An The objective lens drive apparatus according to claim 32, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted disposed on the printed circuit boards.
- 35. (Currently Amended) An The objective lens drive apparatus according to claim 32, wherein the coil unit includes a plurality of comprises a printed circuit board, and the focus coil and the tracking coil are mounted on the printed circuit board.
- 36. (Currently Amended) An The objective lens drive apparatus according to 32, wherein the number of the coil unit comprises an even number of focus coil is even coils and the number of the only one tracking coil is one, and the magnet is configured to be magnetized in two polarities in a tracking direction.



37. (Currently Amended) An objective lens drive apparatus <u>configured to be</u> used in an optical pickup <u>for detecting to detect</u> the inclination of an optical disk to adjust the inclination of an objective lens in accordance with an inclination signal of the optical disk, comprising:

two magnetic circuits respectively including comprising a magnet configured to be magnetized in two polarities; and

a coil unit including comprising a focus coil, a tracking coil and a tilt coil, wherein the focus coil, the tracking coil and the tilt coil are disposed within a magnetic gap of one of the magnetic circuits,

wherein a tracking servo is <u>configured to be</u> executed by supplying currents respectively to a plurality of the tracking coils due to the <u>a</u> sum of drive forces generated in the plurality of focus coils, <u>and</u>

wherein the <u>an</u> inclination adjustment of the objective lens is <u>configured to be</u>
executed by generating <u>a</u> moment around the <u>a</u> center of gravity of a movable part due to the
<u>a</u> difference between the drive forces.

- 38. (Currently Amended) An The objective lens drive apparatus according to claim 37, wherein the magnetic circuit includes comprises a plurality of the magnet, and the coil unit is disposed within the magnetic gap formed by the magnet gaps magnets.
- 39. (Currently Amended) An The objective lens drive apparatus according to claim 37, wherein the coil unit includes comprises a plurality of printed circuit boards, and the focus coil and the tracking coil are separately mounted disposed on the printed circuit boards.
- 40. (Currently Amended) An The objective lens drive apparatus according to claim 37, wherein the coil unit includes a plurality of comprises a printed circuit board, and the focus coil and the tracking coil are mounted disposed on the printed circuit board.



- 41. (Currently Amended) An The objective lens drive apparatus according to claim 37, wherein the number of the coil unit comprises only one focus coil is one and the number of the an even number of tracking coil is even coils, and the magnet is configured to be magnetized in two polarities in a focus direction.
- 42. (Currently Amended) An objective lens drive apparatus for use configured to be used in an optical pickup, comprising:

a magnetic circuit including comprising a magnet configured to be magnetized in two polarities; and

a coil unit including comprising a focus coil, a tracking coil and a tilt coil[[,]]; and wherein a lens is configured to be adjusted in a focusing direction, a tracking direction, and a tilt direction by one the magnetic circuit and coils is provided in a lens holder.

- 43. (New) The objection lens drive apparatus according to claim 1, wherein one coil unit corresponds to one magnetic circuit.
- 44. (New) The objection lens drive apparatus according to claim 22, wherein one coil unit corresponds to one magnetic circuit.
- 45. (New) The objection lens drive apparatus according to claim 42, wherein one coil unit corresponds to one magnetic circuit.
- 46. (New) The objection lens drive apparatus according to claim 1, wherein at most one coil unit is disposed within the magnetic gap.
- 47. (New) The objection lens drive apparatus according to claim 22, wherein at most one coil unit is disposed within the magnetic gap.
- 48. (New) The objection lens drive apparatus according to claim 42, wherein at most one coil unit is provided to correspond to the magnetic circuit.

